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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
KASHNIKOW, ERIK	
ART UNIT	PAPER NUMBER
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10/03/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/542,935	DAMBRICOURT, GERY BERNARD MARIE CORNIL	
	Examiner	Art Unit	
	ERIK KASHNIKOW	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *32-73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *32-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2005* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/21/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The use of the trademarks AFFINITY™ and EXACT™ has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “32” has been used to designate both flows of materials and sectors. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: **17**. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 32-39, 53, 56-69 and 72-73 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 37-45, 48, 52, 58-59 and 66-81 of copending Application No. 10/543,077 in view of Dambricourt (WO00/64769 with US 6,695,169 used as a translation). Although the conflicting claims are not identical, they are not patentably distinct from each other because the physical property taught by the equation present in the copending application regarding the dispersion factor, would on the one hand be intrinsic because the tubes of the instant claims are made from the same materials as the tubes of the copending claims, and therefore the dispersion factor would be an intrinsic property. It is also pointed out by Examiner that while there is no disclosure in present claims of dispersion factor, it is clear that the specific polymer mixture disclosed by copending claims would fall within the broad disclosure of the present claims. The claims also differ in that there is no disclosure in the copending claims in regards to the ratio of the determined perimeter to the joining radius being at least equal to 4.5. Dambricourt teaches that this ratio is known in the art (column 3 lines 33-51). One of ordinary skill in the art would be motivated to use such ratio because the invention of Dambricourt offers a tube which is completely emptiable.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 32-71 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The term "substantially" in claims 32 and 50 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Substantially appears in claims 32 and 50 with regards to an item being "substantially constant" and again in claim 50 with regards to the item being "substantially identical".

9. In regards to claim 40, the term preferably in the 4th line makes it unclear whether that portion is being claimed or not, and as such one of ordinary skill in the art at the time of the invention would not be fully apprised of the scope of the claim.

10. Claims 62 and 68 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the instant case the scope of the claim is confusing because it is not clear how the tip would place the wall of the reducer under centrifugal radial tension.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 32-45, 50-61, 66 and 70-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dambricourt (WO/2001/068355 with US 2003/0194521 used as an English translation and hereinafter Dambricourt 01) in view of Johnson et al. (US 5,314,746) and Dambricourt (WO00/64769 with US 6,695,169 used as a translation and hereinafter Dambricourt 00).

13. Dambricourt 01 teaches a tube resistant to stress cracking and impermeable to water vapor (paragraph 0001).

14. In regards to claim 32, 33, 42, 43, 72 and 73 Dambricourt 01 teaches a tube which has a skirt and a distribution head, wherein the walls are made from at least one ethylene linear olefin copolymers which has a wall thickness at mid height of between 0.30 and 1.00mm and that the tube is formed from a single operation, which would produce a single piece assembly (claim 1).

15. In regards to claim 37 Dambricourt 01 teaches that multiple copolymers can be used to form the wall of their tube and that the second polymer may be an ethylene-octene copolymer (claims 17, 18 and 19).

16. In regards to claims 40-41 Dambricourt 01 teaches that the tube can have lengths of 40-200mm inclusive (paragraph 0008). For the multiplier coefficient, given

that the length of the tube is 40-200 mm, it is calculated that square root of 40 * (0.045-0.065) is 0.28-0.41 and square root of 200 * (0.045-0.065) is 0.64-0.91. Therefore, since the tube of Dambricourt 01 has thickness of 0.3-1 mm (claim 1), it clearly meets the requirements of claims 40-41.

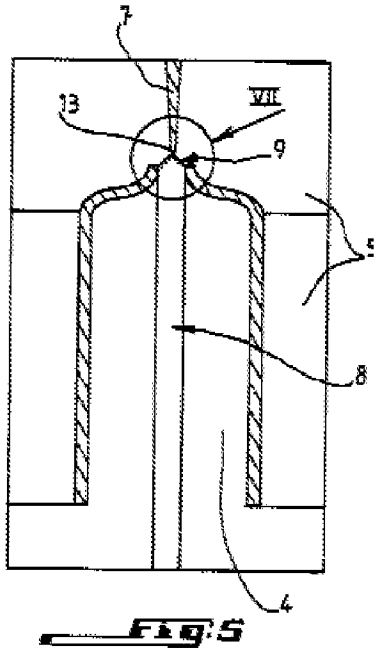


Fig. 5

17. In regards to claim 53 Dambricourt 01 teaches that the tube be formed by injecting the polymers into a mold cavity which has a mold insert which contains a central part which has a free upper end and is centered on the tube (paragraph 0011). In regards to the requirement that the impression bears a resemblance to the tube skirt, while Dambricourt is silent regarding this the pictures shown by Dambricourt show the same features as the pictures shown by Applicant (Fig 5 Dambricourt (top) Fig 5 applicant (bottom).

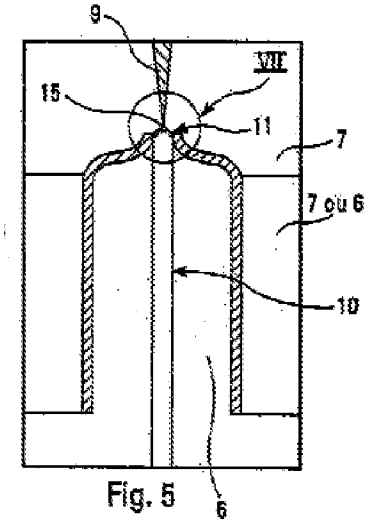


Fig. 5

18. In regards to claim 54 Dambricourt 01 teaches using feed channels for the injection molding (paragraph 0122). Dambricourt 01 also shows in the feed or supply channels forming an apex wall (Figure 7).

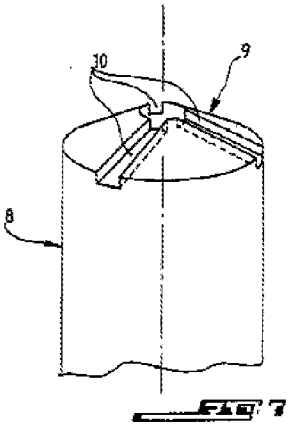


Fig. 7

19. In regards to claim 55 Dambricourt 01 teaches that the central part of the injection core be mobile (paragraph 0016). Dambricourt 01 also teaches that the mobile part can be

pulled back a set distance to form the upper wall in a single piece (paragraph 0016). Since all other limitations have been taught by Dambricourt 01 it would have been well with in the ability of one of ordinary skill in the art at the time of the invention to form the apex wall.

20. In regards to claims 56-60 Dambricourt 01 teaches a sunken cone at the evacuation orifice (paragraph 0012) they are silent regarding the specific angles and projecting cone frustums. However it is examiners opinion that this is an obvious design choice, because it allows for controlled evacuation of the contents of the tube, and it is well with in the abilities of one of ordinary skill in the art at the time of the invention.

21. In regards to claim 61and 66 Examiner is treating it as a product by process, for information on product by process see MPEP 2113. In regards to claims 61 and 66 Dambricourt 01 teaches a nozzle (a cavity through which the material is led into or out of the tube (paragraph 0111)) as is shown in figure 5 above. One of ordinary skill in the art at the time of the invention would recognize the area with the narrowing of the tube within the circle as a nozzle. Dambricourt also teaches that a reducer can be incorporated into the tube (paragraph 0129).

22. In regards to claims 72 and 73 Dambricourt 01 teaches that the tube in claim 37 be formed with a method utilizing a single injection mould comprising an impression and a core (paragraphs 0109-0113).

23. While Dambricourt 01 teaches the above stated tube and method of forming the tube, they remain silent regarding the use of polypropylene.

24. Johnson et al. teach a polyolefin films which can be comprised of copolymers of propylene and ethylene (column 2 lines 3-5).

25. In regards to claim 34, 38, 39, 72 and 73 Johnson et al. teach that the copolymers of polypropylene and polyethylene have a flexural modulus of 137.9-689.5 MPa (column 8 lines 16-20).

26. In regards to claim 35 Johnson et al teach that polypropylene ethylene copolymer be semi-crystalline, or heterophase (column 3 lines 1-2).

27. In regards to claim 36 while Johnson et al. is silent regarding mixing the polypropylene polyethylene copolymer with another polypropylene polyethylene copolymer, Dambricourt 01 teaches using copolymers of the same materials as a mixture for the tubes in their invention. One of ordinary skill in the art would be motivated to use the same materials because it can form a tube with improved flexibility (paragraph 0017). Therefore it would of been obvious and well within the abilities of one of ordinary skill in the art at the time of the invention to use slightly different polypropylene and polyethylene copolymers in the forming of the tube.

28. One of ordinary skill in the art at the time of the invention would be motivated to modify the film of Johnson et al. with the tube of Dambricourt 01 because the tube of Dambricourt 01 which offers improved resistant to stress cracking and is impermeable to water vapor (paragraph 0007) would benefit from the high puncture and tear resistant films of Johnson et al. (column 1 lines 7-10).

29. As stated above Dambricourt 01 and Johnson et al. teach the fully emptiable tubes but are silent regarding the ratio between the joining area and the predetermined

perimeter, the maximum incline, barrier varnishes and the ratio between neck and wall thickness.

30. In regards to claims 32, 33, 71 and 72 Dambricourt 00 teaches fully emptiable tubes with a ratio between radius of connecting surface in the longitudinal plane, with the circumference of the skirt in a transverse plane, and which as shown in figures 6 and 7 of Dambricourt 00 match up with determined perimeter and joining radius of the instant application as seen in figures 1 and 2 of the instant application. Dambricourt 00 teaches that these ratios are less than 20 and preferably less than 1.5(column 3 lines 33-51), which covers Applicant's range.

31. In regards to claims 44 and 45 Dambricourt 00 teaches an embodiment wherein the neck with respect to the axial direction as a maximum incline of between 30-45^{o} (column 3 lines 22-27).

32. In regards to claims 50 and 51Dambricourt 00 teaches giving the neck and the skirt different wall thickness, wherein the ratio between the two is no greater then 2.0 (column 3 lines 52-57), which covers Applicants range of less than 1.5. Given that Dambricourt et al. state that the ratio is the ratio of the neck thickness to the skirt thickness, this would indicate that the neck thickness is greater. While Dambricourt is silent regarding how the wall thickness is decreased it would of been obvious to one of ordinary skill in the art at the time of the invention to make the decrease a gradual decrease to lessen the stress put on the tube and the area between the two thicknesses.

33. In regards to claim 52 Dambricourt 00 teaches that the tube is coated with a barrier varnish over the surface (column 3 lines 60-67).

34. In regards to claim 70 it would be obvious to one of ordinary skill in the art at the time of the invention to choose the determined perimeter to a value that would suitably contain a set amount of that which they want to contain.

35. In regards to claim 71 the Figures in Dambricourt 00 show multiple examples wherein the radius of curvature increases continuously from the neck to the skirt.

36. One of ordinary skill in the art at the time of the invention would be motivated to modify the invention of Dambricourt 01 and Johnson et al. with that of Dambricourt 00 because the invention of Dambricourt 00 offers a tube which is completely emptiable (column 1 lines 42-45).

37. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dambricourt (WO/2001/068355 with US 2003/0194521 used as an English translation and hereinafter Dambricourt 01) in view of Johnson et al. (US 5,314,746) and Dambricourt (WO00/64769 with US 6,695,169 used as a translation and hereinafter Dambricourt 00) and Phlippoteau (US 3,839,890).

38. As stated above Dambricourt 01 Dambricourt 00 and Johnson et al. teach the fully emptiable tubes but are silent regarding the generatrix.

39. Phlippoteau teaches flexible tubes used for packaging pasty materials (column 1 lines 5-7).

40. In regards to claims 46 and 47 Phlippoteau teaches a generatrix having angles between 1 and 30° from the axis (column 3 lines 10-15).

41. In regards to claim 48 Phlippoteau disclose the use of generatrix angle of 1°, while the present claims require an angle of about 0.5°.

It is apparent, however, that the instantly claimed value of about 0.5° and that taught by Phlippoteau are so close to each other that the fact pattern is similar to the one in In re Woodruff , 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or Titanium Metals Corp. of America v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a "slight" difference in the ranges the court held that such a difference did not "render the claims patentable" or, alternatively, that "a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties".

In light of the case law cited above and given that there is only a "slight" difference between the value of 1° disclosed by Phlippoteau and the value disclosed in the present claims, it therefore would have been obvious to one of ordinary skill in the art that the value of 0.5° disclosed in the present claims is but an obvious variant of the value disclosed in Phlippoteau, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

42. In regards to claim 49 it would have been obvious to one of ordinary skill in the art at the time of the invention that in order to produce the angle from the tube in a consistent manner that the generatrix must be in a straight line.

43. One of ordinary skill in the art at the time of the invention would modify the inventions of Dambricourt 00 and 01 and Johnson et al. with that of Phlippoteau because the invention of Phlippoteau offers a reduction in volume in the package and a reduction in risk of damage during transportation (column 1 lines 28-30).

44. Claims 67, and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dambricourt (WO/2001/068355 with US 2003/0194521 used as an English translation) in view of Johnson et al. (US 5,314,746) and (WO00/64769 with US 6,695,169 used as a translation and hereinafter Dambricourt 00) as applied to claim 58 and in further view of Nishikawa (US 5,372,863).

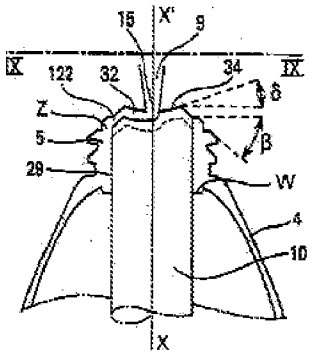
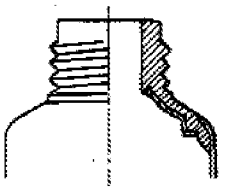


Fig. 9

45. While Dambricourt 00 and 01 and Johnson et al. teach the tube and method for forming the tube as shown above, they are silent regarding a ring of material perpendicular to the axial direction under the neck.

FIG. 2
PRIOR ART

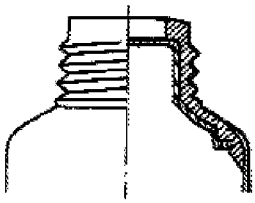


46. Nishikawa teaches a laminate tube container to be used for toothpaste (column 1 lines 10-12).

47. In regards to claims 67 and 69 Nishikawa shows another conventional embodiment which has the chimney feature described by Applicant (Figure 3).

48. Since the two inventions are drawn to analogous art, one of ordinary skill in the art would be well aware of this conventional top and would it would be well within the abilities of one of ordinary skill in the art at the time of the invention to include it in their tube if they so desired.

FIG. 3
PRIOR ART



49. Claims 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dambricourt (WO/2001/068355 with US 2003/0194521 used as an English translation) in view of Johnson et al. (US 5,314,746) and (WO00/64769 with US 6,695,169 used as a translation and hereinafter Dambricourt 00) in further view of Doherty et al. (WO/2001/094213).

50. While Dambricourt 00 and 01 and Johnson et al. teach the tube and method for forming the tube as shown above, they are silent regarding the cap incorporated onto the tube.

51. Doherty et al. teach a dispensing apparatus with a reusable break off cap (page 1 lines 8-13).

52. In regards to claim 63 Doherty et al. teach that the dispenser and nozzle are molded as a single piece (claim 19).

53. In regards to claim 64 and 65 Doherty et al teach that the cap can be reattached by means of a asymmetric threads as seen in figure 18 (threads are labeled 70 see also page 19 lines 16-18).

54. One of ordinary skill in the art at the time of the invention would be motivated to modify the tube of Dambricourt 00 and 01 and Johnson et al. with the tubes of Doherty et al. because the tubes of Dambricourt and Johnson et al. which are resistant stress cracking and impermeability to water vapor (paragraph 0007) would benefit from the nozzle of Doherty et al. because the tubes provides a low cost multi use container that can be used with environmentally sensitive products (column 2 line 66– column 3 line 2).

Conclusion

55. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Pitkanen et al. (US 6,342,564) adds additional information regarding heterophase polypropylene and polypropylene ethylene copolymers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is (571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (Second Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikow
Examiner
Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794